UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/848,826	05/04/2001	Eran Gabber	Gabber 17-1-10-1	7476

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EXAMINER
DINH, NGOC V

ART UNIT	PAPER NUMBER
2187	

DATE MAILED: 01/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>03</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>08 November 2004</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-57* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7, 20-24 and 27-30* is/are rejected.

7)☒ Claim(s) *8-19, 25, 26 and 31-57* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

FINAL REJECTION

1. The Applicant declaration filed on 11/08/2004 under 37 CFR 1.131 has been considered but is ineffective to overcome the US 2003/0009538 reference.

a) According to MPEP 715.04 (Execution of Declaration) section A that All the inventors of the subject matter claimed may make a affidavit under 37 CFR 1.131. The Applicant's 37 CFR 1.131 Affidavit is signed by only three inventor, except Shriver Elizabeth.

Even so Shriver was deceased, however since there is nothing of record in the application regarding the fourth inventor (i.e. shown to be deceased), MPEP 715.04 still applies.

In the case of Jointed Applicant of Application is deceased, The remaining Applicant (s) is/are referred to MPEP section 715.04(D) and 409.01(e) for further information. The MPEP in particular section 715.04(D) and 409.01(e) are reproduced as below:

> **715.04(D) The assignee or other party in interest when it is not possible to produce the affidavit or declaration of the inventor. Ex parte Foster, 1903 C.D. 213, 105 O.G. 261 (Comm'r Pat. 1903).**
>
> Affidavits or declarations to overcome a rejection of a claim or claims must be made by the inventor or inventors of the subject matter of the rejected claim(s), a party qualified under 37 CFR 1.42, 1.43, or 1.47, or the assignee or other party in interest when it is not possible to produce the affidavit or declaration of the inventor(s). Thus, where all of the named inventors of a pending application are not inventors of every claim of the application, any affidavit under 37 CFR 1.131 could be signed by only the inventor(s) of the subject matter of the rejected claims. **Further, where it is <u>shown</u> that a joint inventor is deceased, refuses to sign, or is otherwise unavailable, the signatures of the remaining joint inventors are sufficient. However, the affidavit or declaration, even though signed by fewer than all the joint inventors, <u>must show completion </u>of the invention by all of the joint inventors of the subject matter of the claim(s) under rejection. In re Carlson, 79 F.2d 900, 27 USPQ 400 (CCPA 1935).**

409.01(e) If Applicant of Assigned Application Dies

When an applicant who has prosecuted an application after assignment, dies, the

administrator of the deceased applicant's estate may carry on the prosecution upon filing

letters of administration unless and until the assignee intervenes (MPEP §
402.07).

b. Applicant's discussion on page 2, section 3 (see, Applicant Affidavit) of each of the

declarations merely states "Exhibit "A" describes the invention claimed in at least claims 1-10,

13-15, 20-22, 27 and 28 of the above identified application" with no further explanation and as

such is insufficient as per MPEP 715.07 (I, last paragraph).

The rejections of claims 1-7, 20, 27 are respectfully maintained as being anticipated by Shah et

al. [US 2003/0009538]. Claim 21 is rejected by Shah et al. Claims 22-24, 28-30 are inherently

taught by Shah. Claims 8-17, 25-26, 31-57 are object to.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis

for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the
invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of
paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

2. Claims 1-7, 20-24, 27-30 are rejected under 35 U.S.C.102 (e) as being anticipated by Shah et

al. [US 2003/0009538].

Per claim 1:

Shah teaches a file system for a client computer system [fig. 1] which comprises main memory

and at least one secondary storage device [fig. 8], where said file system [805, fig. 8] is

programmed to receive and service file requests, to control accesses (including reads and writes)

to a main memory [col. 6, [0135]], to group files together in clusters [e.g., access patterns can be

collected into profile, col. 15 [0274]] and to store and retrieve clusters from said at least one

secondary storage device, and where said file system comprises file system clustering logic

which assists in said grouping of files together in clusters by grouping together files likely to be requested from said file system in close temporal proximity [col. 15, [0274]].

Per claims 2 and 4:

Inherently Shah teaches a library of functions provided to applications by said file system, a function which takes as arguments at least two file names, which, when called, indicates to said file system clustering logic that said at least two file names provided as arguments should be stored together [e.g., these access patterns can be collected into profiles ... to pre-package groups of application file pages, col. 15 [0274] in one cluster if possible; as part of a library of functions provided to applications by said file system, a collocation function which takes as arguments at least two file names, which, when called, indicates to said file system clustering logic that the files named by the file names provided as arguments should be stored together in one cluster if possible. This is because in order to collect files with same pattern [temporal proximity] into a profile, the file system must have a process/program [function/procedure] or subroutine [collocation function], which when being called [executed] will take files as input arguments, compare [comparison process needs at least 2 entities, in this case at least 2 file names] and identify files with same pattern [temporal proximity] and group them all together into a profile.

Per claim 3:

Shah teaches file system clustering logic examines historical calls [e.g., access patterns, temporal locality, col. 15, [0274]] to files in order to determine which files are likely to be requested from said file system in tandem or close temporal proximity.

Per claims 5 and 7:

Shah teaches a caching proxy system comprising a computer system utilizing the file system, and programmed to receive and serve requests for data from a large distributed-data network; large distributed-data network is the World Wide Web [fig. 34, 36; col. 3 [0062-0064]; col. 8, [0166]; col. 13 [0230]].

Per claim 6:

Inherently Shah teaches computer system is programmed to utilize said collocation function to provide an indication to said file system that the files named by the file names provided as arguments should be stored together in one cluster if possible. This is because in order to collect files with same pattern [temporal proximity] into a profile, the file system must have a

process/program [function/procedure] or subroutine [collocation function], which when being
called [executed] will take files as input arguments, compare and identify files with same pattern
[temporal proximity] and group them all together into a profile.

Per claim 20:

Shah teaches a library of functions provided to applications by said file system, comprising a
write function [e.g., writeback function in cache system] which, when called, writes a given file
directly to said at least one secondary storage device [col. 6, [0135]].

Per claim 21:

Inherently, Shah teaches when write function is called, removes the given file from memory.
This is because write operation/function will overwrite the old file by new file.

Per claims 22-24:

Inherently, Shah teaches: writing of a given file directly to at least one second storage device is
delayed until: **I)** more space is needed in main memory; **II)** File system is idle; **III)** either
more space is needed in main memory or file system is idle. This is because whenever a page
fault occurs on behalf of any application file residing on the Client Streaming File System, that
file system requests the page from the Cache. Then the File System that is used to manage
specific application-related file accesses [e.g., page fault] during the execution of an application.
If page fault occurs resulting of a read operation, File system will be busy to handle this page
fault [col. 6, [0135], during this cycle [File System busy/idle], write operation is delayed until
file system resolving page fault.

Furthermore, when the main memory is in need of space for storage, then the file system must
call the grouping function in the daemon for clustering files together. By clustering files together,
the main memory would be defragmented and this allows many small fragmented areas of main
memory to be relocated to make a larger working space.

Per claim 27:

Shah teaches file system further comprises a daemon which groups files together in clusters and
stores clusters to said at least one secondary storage device [col. 15, [0274]].

Per claims 28-30:

Inherently Shah teaches: the operations of said daemon occur when: **I)** more space is needed in
said main memory; **II)** File System is idle; **III)** more space is needed in said main memory or

File System is idle. This is because Whenever a page fault occurs on behalf of any application file residing on the Client Streaming File System, that file system requests the page from the Cache. Then the File System that is used to manage specific application-related file accesses [e.g., page fault] during the execution of an application. If page fault occurs resulting of a read operation, File system will be busy to handle this page fault [col. 6, [0135], during this cycle [File System busy/idle], write operation is delayed until file system resolving page fault. Furthermore, when the main memory is in need of space for storage, then the file system must call the grouping function in the daemon for clustering files together. By clustering files together, the main memory would be defragmented and this allows many small fragmented areas of main memory to be relocated to make a larger working space.

Allowable Subject Matter

3. Claims 8-19, 25-26, 31-57 are objected to as being dependent upon a rejected base claims, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

4. **THIS ACTION IS MADE FINAL**. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for response to this final action is set to expire THREE MONTHS from the date of this action. In the event a first response is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event will the statutory period for response expire later than SIX MONTHS from the date of this final action.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a) Bopardikar et al PN 6640285 discloses Grouping cache lines having the same temporal

characteristics on the same page.

Any inquiry concerning this communication or earlier communications from the examiner

should be directed to Ngoc Dinh whose telephone number is (703) 305-3023. The examiner can

normally be reached on Monday-Friday 8:30 AM-5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor,

Donald A. Sparks, can be reached on (703) 308-1756. The fax phone numbers for the

organization where this application or proceeding is assigned are (703) 746-7239 for regular

communications and (703) 746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should

be directed to the receptionist whose telephone number is (703) 305-3900.

NGOC DINH

Patent Examiner

ART UNIT 2187

January 18, 2005

DONALD SPARKS
SUPERVISORY PATENT EXAMINER